

molecules from *every* gasoline manufacturer who supplied product into the delivery system that supplies Queens County.

40. Instead, it is my opinion that, at any point in time, a given UST would have contained product from a much more limited number of producers. There are even some cases in which a single supplier's product might end up in a Queens County UST or other storage facility without having ever been commingled or blended with anyone else's product. For example, I am aware that some companies, who are Defendants in this case, purposefully keep some grades of their gasoline completely segregated all the way from the refinery to the consumer. I understand that both Amoco Oil Company (now BP Products North America Inc.) and Sunoco, Inc. (R&M), had long-standing requirements that their highest octane premium gasoline be completely segregated and not commingled with another company's product anywhere in the supply chain.^{34,35}

41. Local or regional transportation logistics, or a company's contractual commitments at a given time, can also lead to product segregation. For example, an opportunistic blender might import competitively-priced gasoline blendstocks into NY Harbor, blend them into MTBE gasoline in tanks specifically leased or owned for that purpose, and then deliver that single batch to a large commercial account in Queens County without the gasoline ever being commingled with product from any other suppliers. Thus, in my view, there is no reasonable basis to conclude that all Defendants' products -- or even a majority of the Defendants' products -- were present in any particular gallon of MTBE gasoline release, or even in multiple releases from any single site over a period of time in Queens County.

42. In addition, because of the supply chain characteristics described previously in this Report, the large number of important (but unnamed) gasoline-producing entities that participated in the gasoline supply chain in Queens County, and the limited volumes of gasoline

³⁴ Defendants Sunoco, Inc. and Sunoco, Inc. (R&M)'s Further Response to Plaintiffs' Revised First Set of Interrogatories as Further Revised Pursuant to Pre-Trial Order No. 30, as provided in the Suffolk County MTBE case, March 28, 2007, pp. 24 and 26.

³⁵ Responses of Defendant BP Products North America Inc. to Discovery Requests in Case Management Order No. 4, as provided in the Suffolk County MTBE case, December 31, 2004, Paragraph III.B.2 (a) (v), p. 12.

that are supplied from PADD III (where many Defendants own significant refining capacity), there is no factual basis to conclude that every MTBE gasoline release in Queens County contained gasoline molecules produced by every Defendant. Instead, in my opinion, any such release would have contained product created by a much more limited number of market participants, some of which are not named as Defendants in this case. As the Court has said, *"However, even drawing all inferences in plaintiff's favor, no reasonable jury could find, by a preponderance of the evidence, that each defendant's gasoline caused the contamination of each well. Many refiners supply the New York area – almost fifty were named as defendants in this case – and overseas companies not named as defendants also supply gasoline to the New York regional market."*³⁶

43. Thus, in my opinion, there is no reasonable basis on which to conclude, as Plaintiff's expert, Mr. Burke, does, that volumes of MTBE-gasoline stored in any (or every) Queens County UST contained MTBE molecules from *every* Defendant who sold gasoline that reached NY Harbor in a given year, much less every Defendant that *ever* sold MTBE gasoline between 1979 and 2003. This is not to imply that MTBE gasoline stored in Queens County in any one year between 1979 and 2003 would not have contained MTBE molecules from more than one supplier.

SUMMARY

44. In my view, the most appropriate geographic market to consider when applying the market share theory or the commingled product theory to Queens County, is the NY Harbor RFG market as defined in this Report. A narrower market definition (for example, Queens County) is not workable due to insufficient information and an inability to determine the original sources of the product (other than NY Harbor generally), while a broader market definition (for

³⁶ The Honorable Shira A. Scheindlin, *op. cit.*, p. 28.



IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF NEW YORK

In re: Methyl Tertiary Butyl Ether ("MTBE")
Products Liability Litigation

CITY OF NEW YORK,

Plaintiff,

-against-

AMERADA HESS CORPORATION, et al.,

Defendants.

MDL No. 1358

Case No. 04-CV-3417 (SAS)

(Jury Trial Demanded)

On Behalf of
Shell Oil Company, Shell Oil Products Company, Shell Trading (US)
Company, LLC, Equilon Enterprises, LLC, Motiva Enterprises, LLC,
and TMR Company

Expert Report of
JOSEPH P. KALT, Ph.D.
Compass Lexecon

February 13, 2009

groundwater in the Affected Area."¹⁰ These allegations include, but are not limited to:

- The City of New York proposes to define the "Products" as "methyl tertiary butyl ether ("MTBE"); "all petroleum products containing MTBE"; and "any degradation byproducts of commercial grade MTBE, including but not limited to tertiary butyl alcohol."¹¹
- The City of New York asserts that, "from at least the early 1980s, Defendants and other gasoline refiners collectively knew, actually and/or constructively, about the dangers and risks that the Products posed to groundwater and soil but did not at any time warn the public, local gasoline stations, or any governmental entity of these unique dangers, nor did the Defendants cease selling and/or marketing the Products, or take any action which would improve the safety of the Products."¹²
- The Plaintiff alleges that the Shell Defendants, through the testimony of a former employee, were aware of the risks to groundwater associated with selling the Products following the investigation of a petroleum spill in Rockaway, New Jersey.¹³
- The City of New York proposes that, because of the infeasibility of tracing and quantifying specific discharges (if any) of the Product that may have occurred and affected Queens to specific Defendants or other suppliers, "market share liability" should be employed, with liability accruing in "an amount equal to [each Defendant's] respective share of the United States national market for the Products."¹⁴

B. Plaintiff's Expert

1. The Plaintiff's expert Bruce Burke has submitted a report in which he asserts that, as a result of the commingling of gasoline throughout the complex gasoline distribution network servicing

¹⁰ Fourth Amended Complaint at paragraph 3.

¹¹ Fourth Amended Complaint at paragraph 68.

¹² Fourth Amended Complaint at paragraph 84.

¹³ Fourth Amended Complaint at paragraph 85.

¹⁴ Fourth Amended Complaint at paragraphs 64-66.

PADD 1,¹⁵ it is likely that *each and every* Defendant had its MTBE-gasoline released into New York and the Relevant Geographic Area ("RGA").¹⁶ Mr. Burke further states that, "for the Defendants that supplied MTBE gasoline into the gasoline distribution system that supplied the RGA, over time it is a virtual certainty that their MTBE-gasoline is present in any release that occurred while they were doing that supplying. The fact that Defendants did not have title to the gasoline delivered to the RGA or did not know that it was delivered to the RGA does not change the validity of this conclusion."¹⁷

2. As a general framework, Mr. Burke postulates that the inability to track specific production quantities of MTBE-gasoline dispersed through the QSN implies the culpability of each and every Defendant. Moreover, Mr. Burke notes, "In many cases, Defendants state that it is difficult or impossible for them to know how much of the MTBE-gasoline they produced was delivered to the RGA. This is consistent with my view that, once gasoline is supplied into the primary distribution system supplying PADD I, the extensive and repeated co-mingling of supplies from multiple sources, and the transfer of title along the way between refineries and the ultimate consumers, does not allow for keeping track of where gasoline manufactured at each refinery is ultimately consumed."¹⁸

- a) Mr. Burke repeatedly refers to the complex gasoline supply chain which includes refineries, receiving tanks, pipelines, barges, distribution terminals, product terminals, and trucks which ultimately deliver product to retail service stations.

¹⁵ "PADD 1" refers to the federally defined Petroleum Administration for Defense District 1, encompassing the states of Florida, Georgia, South Carolina, North Carolina, Virginia, West Virginia, Maryland, Delaware, Pennsylvania, New Jersey, New York, Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, Maine, and the District of Columbia.

¹⁶ Burke Report at page 34. The RGA is defined by the Court as the area encompassed by a series of zip codes located in eastern Queens. These zip codes are: 11001, 11003, 11004, 11355, 11364, 11365, 11366, 11367, 11368, 11374, 11375, 11385, 11411, 11412, 11413, 11414, 11415, 11416, 11417, 11418, 11419, 11420, 11421, 11422, 11423, 11426, 11427, 11428, 11429, 11430, 11432, 11433, 11434, 11435, 11436, 11451, and 11580 (Case Management Order #4, *In re: Methyl Tertiary Butyl Ether ("MTBE") Products Liability Litigation*, MDL 1358 (SAS), October 19, 2004, at pages 2-3).

¹⁷ Burke Report at page 40.

¹⁸ Burke Report at page 39.

Based on the fact that gasoline is commingled in the complex gasoline distribution network, Mr. Burke asserts that, "it is reasonable to assume that, over time, gasoline produced by any manufacturer that supplied MTBE-gasoline into the overall system that supplies the RGA also supplied the RGA with MTBE-gasoline."¹⁹

- b) In his discussion of the Shell Defendants specifically, Mr. Burke notes that, "[t]he Shell Defendants sell a significant volume of the gasoline produced at their refineries to third parties and that product generally cannot be tracked."²⁰ In his report, Mr. Burke recites numerous Defendants' statements with regard to their manufacture and supply of reformulated gasoline and/or gasoline containing MTBE into the QSN. Among other recitations found in Mr. Burke's report, he includes a number of excerpts of statements made by the Shell Defendants in the MTBE litigation:

- 1) "Gasoline containing oxygenates that may have been sold in the RGA may have been blended at a number of different facilities, including a former Shell refinery at Deer Park, Texas (now owned by Deer Park Refining L.P.); a Shell refinery at Norco, Louisiana (now owned by Motiva Enterprises); and a blending facility at Sewaren, New Jersey (now owned by Motiva Enterprises LLC). Gasoline from Motiva's former Delaware City, Delaware refinery (which was recently sold by Motiva) was sent by barge to the New York area for sale in the New York metropolitan area."²¹
- 2) "Gasoline produced at Motiva refineries may have supplied the New York area via the Buckeye Pipeline, Colonial Pipeline, Plantation Pipeline and Sun Pipeline."²²

¹⁹ Burke Report at page 40.

²⁰ Burke Report at page 38, citing The Shell Defendants' Responses and Objections to Plaintiffs Revised Third Set of Interrogatories to all Defendants, at page 5.

²¹ Burke Report at page 75, citing Response of Defendants Shell Oil Company, Shell Oil Products Company and Shell Oil Products Company LLC to Plaintiffs Second Set of Interrogatories and Requests for Production of Documents to all Defendants, at page 24.

²² Burke Report at page 75, citing Shell Defendants' Answers and Objections to Plaintiffs Revised Third Set of Interrogatories to all Defendants, at page 22 (*sic*).

- 3) "On information and belief, the Shell Defendants did not deliver 'MTBE Gasoline' via rail to the RGA. On information and belief, neither the Delaware City Refinery nor the Gulf Coast refineries would have supplied the RGA by the responsive road routes because the typical distribution pattern would make it economically unreasonable. While there are no known deliveries from the STUSCO Sewaren blending operation via the responsive road routes, on information and belief, it is possible a rare delivery of product from Motiva's Sewaren terminal could have been delivered via the responsive road routes."²³
- 4) "Gasoline containing oxygenates that may have been sold in the RGA may have been blended at a number of facilities, including Motiva (*sic*) Refinery at Norco, Louisiana; and a blending facility at Sewaren, NJ. Gasoline from Motiva's Delaware City, Delaware refinery (which was recently sold by Motiva) was sent by barge to the New York area for sale in the New York Metropolitan area. Gasoline from Norco, Convent, and Port Arthur refineries and the Sewaren blending facility would have been transported by pipeline."²⁴
- 5) "The Deer Park refinery first blended MTBE into gasoline in November 1979 and the Norco refinery first blended MTBE into gasoline in October 1980. Therefore, Table No. 4 provides the total gasoline production volumes for Deer Park and Norco from the respective dates on which they first blended MTBE through December 1994. The data in Table No. 4 were calculated using total gasoline production data from the respective refineries (*sic*) files through 1985, to the extent available, and using total gasoline production data obtained from the Energy Information Agency ("EIA") beginning 1986. There (*sic*) total gasoline production

²³ Burke Report at pages 75-76, citing Shell Defendants' Answers and Objections to Plaintiff's Revised Third Set of Interrogatories to all Defendants, at page 32 (*sic*).

²⁴ Burke Report at page 76, citing Response of Defendant Motiva Enterprises, LLC to Plaintiff's Second Set of Interrogatories and Production of Documents to all Defendants, at page 22.

volumes include gasoline that was sent via pipeline, marine, and road routes."²⁵

- 6) "Shell Trading (US) Company ("STUSCO") has leased a portion of Motiva's Sewaren, New Jersey facilities and blended gasoline at the Sewaren Terminal since June 1, 2002. STUSCO provides in Table No. 9 responsive data for the Sewaren Terminal, to the extent such data are available. On information and belief, all of STUSCO's Sewaren conventional 'MTBE gasoline' would have been delivered via Buckeye pipeline to Pennsylvania or to the Upstate New York area. On information and belief, most of the RFG-grade 'MTBE gasoline' produced by STUSCO at the Sewaren Terminal would have been delivered into PADD 1B."²⁶
 - 7) "Beginning June 1, 2002 and continuing through 2003, STUSCO blended MTBE into gasoline at a facility in Sewaren, new (*sic*) Jersey, and then sold the gasoline containing MTBE from that facility through commercial sales. [...] STUSCO admits that it placed gasoline containing MTBE on the Buckeye Pipeline in 2002 and 2003."²⁷
3. Mr. Burke offers no expert opinion relevant to the economics underlying the matter at hand. The report put forth by Mr. Burke addresses where supplies to New York City potentially originate, but does not provide a definition of the relevant supply network based on any economic rationale or any economic analysis. As a straightforward matter, the New York City area has not historically drawn supplies on a non-*de minimus* and non-idiosyncratic basis from the entire United States. Regions ranging from the Rocky Mountains to Alaska and the West Coast have not been suppliers of gasoline or neat MTBE to the QSN.
 - a) The number of nationally operable refineries existing during the relevant time period ranges upwards from 200 during the 1980s,

²⁵ Burke Report at page 76, citing Response of Defendant Motiva Enterprises, LLC to Plaintiff's Second Set of Interrogatories and Production of Documents to all Defendants, at page 25 (*sic*).

²⁶ Burke Report at page 76, citing The Shell Defendants' Responses and Objections to Plaintiff's Revised Third Set of Interrogatories to all Defendants, at page 38.

²⁷ Burke Report at page 77, citing Responses to Pipeline RFAs (*sic*).

and then steadily declines to around 150 after the year 2000.²⁸ It is not conceivable that all operable refineries were realistically suppliers of reformulated gasoline to the QSN. Those refineries with no realistic logistical linkage to the QSN are properly eliminated from the relevant supply analysis.

- b) For example, refineries and blending facilities which operated in California, Washington, New Mexico, Montana, Wyoming, Utah, Colorado, North Dakota, Kansas, Illinois, and others are properly excluded from the calculations regarding supply shares for the Defendants due to economic, infrastructure, and geographic limitations.
- c) In addition, federal and state regulations for gasoline specifications have varied, and continue to vary, throughout the country;²⁹ not all refineries produced a product that met the federal standards that applied for New York City, which required oxygenated reformulated gasoline.³⁰ According to the EIA, the Northeast has been the largest consuming region of reformulated gasoline, accounting for more than 40% of the US total.³¹ In 2002, demand for RFG in the East Coast region was made up of 38% of supply derived from refiners located within the region, 26% from Gulf Coast refiners, and 37% supplied from international imports.³² The EIA has estimated that approximately 60% of New York and Connecticut RFG demand was supplied from international imports.³³

²⁸ Total Number of Operable Refineries, Data 1, Department of Energy, EIA, <[http://tonto.eia.doe.gov/dnav/pet/pet_pnp_cap1_a_\(na\)_800_Count_a.htm](http://tonto.eia.doe.gov/dnav/pet/pet_pnp_cap1_a_(na)_800_Count_a.htm)>, accessed January 8, 2009.

²⁹ *Where Does My Gasoline Come From?*, Department of Energy, EIA, April 2008, <www.eia.doe.gov/bookshelf/brochures/gasoline/index.html>, accessed January 8, 2009.

³⁰ *Preparations for Meeting New York and Connecticut MTBE Bans*, Office of Oil and Gas, Department of Energy, EIA, October 2003, at footnote 1.

³¹ Analysis of Selected Transportation Fuel Issues Associated with Proposed Energy Legislation-Summary, Department of Energy, EIA, September 2002, <www.eia.doe.gov/oiaf/servicrpt/fuel/mtbe.html>, accessed January 16, 2009.

³² *Preparations for Meeting New York and Connecticut MTBE Bans*, Office of Oil and Gas, Department of Energy, EIA, October 2003, at page 6. The East Coast region here refers to PADD 1; see text below for definition of PADDs.

³³ *Preparations for Meeting New York and Connecticut MTBE Bans*, Office of Oil and Gas, Department of Energy, EIA, October 2003, at page 7. In addition, EIA and gasoline industry participants have stated that "the Gulf Coast RFG that flows to the East Coast

- d) As can be seen in Figure 1, the federal government has divided the United States into what are known as PADDs ("Petroleum Administration for Defense Districts"). The nation's five PADDs encompass wide-ranging and diverse geographic areas and topographies, and contain markedly distinct infrastructure and distribution systems. Thus, each PADD is subject to differing supply and demand forces.
- 1) For example, refiners in PADD 2 and PADD 4 did not transport the reformulated blend which conformed to the federal regulations that applied to the New York City area,³⁴ and refiners in PADD 5 primarily produced a reformulated blend that met specific California regulations.³⁵ Therefore, refineries in the United States which produced and transported RFG supplied to the QSN are properly constrained to operations in the PADD 1 and PADD 3 regions.
 - 2) Even if a given refiner could and did manufacture gasoline that met the product specifications for reformulated gasoline required in the New York City area, an indisputable principal determining whether volumes manufactured at any particular refinery or blending facility, in any particular location, could have ultimately supplied MTBE or gasoline containing MTBE to the New York City area rests within existing transportation infrastructure and access to transportation assets. Proper analysis must thus account for available modes of transportation.
4. Mr. Burke's assertions fail to delineate which components of the supply network are relevant for analysis here, do not offer any realistic definition of the QSN, and do not illustrate the potential supply share of the Shell Defendants. According to the Court,

is almost entirely used in RFG States south of New York and Connecticut." (*Preparations for Meeting New York and Connecticut MTBE Bans*, Office of Oil and Gas, Department of Energy, EIA, October 2003, at pages 13-14.)

³⁴ Movements by Tanker, Pipeline, and Barge between PAD Districts, Department of Energy, EIA, <http://tonto.eia.doe.gov/dnav/pet/pet_move_ptb_dc_R10-R20_mbb1_m.htm>, accessed January 24, 2009.

³⁵ Hal R. Varian, "Economic Scene; Gasoline prices are easing-- but not in California. Should the state step in?", *The New York Times*, July 4 2004, <<http://query.nytimes.com/gst/fullpage.html?res=9906E1D81338F932A35754C0A9629C8B63&sec=&spon=&pagewanted=1>>, accessed February 6, 2009.